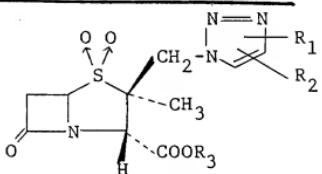


PENICILLIN DERIVATIVES AND PROCESS  
FOR PREPARATION OF THE SAME

ABSTRACT:

A penicillin derivative represented by the following formula

TIOX



wherein R<sub>1</sub> is hydrogen or trialkylsilyl; R<sub>2</sub> is hydrogen, trialkylsilyl or COOR<sub>2</sub>' wherein R<sub>2</sub>' is hydrogen, C<sub>1-18</sub> alkyl, C<sub>2-7</sub> alkoxyethyl, C<sub>3-8</sub> alkylcarbonyloxyethyl, C<sub>4-9</sub> alkylcarbonyloxyethyl, (C<sub>5-7</sub> cycloalkyl)carbonyloxyethyl, C<sub>9-14</sub> benzylcarbonyloxyalkyl, C<sub>3-8</sub> alkoxy-carbonylmethyl, C<sub>4-9</sub> alkoxy-carbonylethyl, phthalidyl, crotonolacton-4-yl,  $\gamma$ -butyrolacton-4-yl, halogenated C<sub>1-6</sub> alkyl substituted with 1 to 3 halogen atoms, C<sub>1-6</sub> alkoxy- or nitro-substituted or unsubstituted benzyl, benzhydryl, tetrahydropyranyl, dimethylaminoethyl, dimethylchlorosilyl, trichlorosilyl, (5-substituted C<sub>1-6</sub> alkyl or phenyl or unsubstituted-2-oxo-1,3-dioxode-4-yl)methyl, C<sub>8-13</sub> benzyloxyalkyl or group for forming a pharmaceutically acceptable salt; and R<sub>3</sub> has the same meaning as above R<sub>2</sub>'.

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